

Application No. 10/810,190
Amendment dated April 21, 2006
Reply to Office Action of October 31, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method for stabilizing at least two adjacent vertebral bodies in the cervical human spine, comprising the steps of:
 - providing a plate of appropriate length adapted to overlap at least a portion of two adjacent cervical vertebral bodies anteriorly, said plate having at least a first plate segment adapted to be attached to one of the adjacent vertebral bodies to be fused and a second plate segment adapted to be attached to another one of the adjacent vertebral bodies to be fused, the first and second plate segments being in moveable relationship to one another along a longitudinal axis of the plate, the first and second plate segments fastened together by a fastener being detachably attached to at least one of the first and second plate segments so as to permit assembly of the plate segments by the surgeon and complete uncoupling of the first and second plate segments from one another;
 - inserting at least a first bone screw through the first plate segment of the plate and into one of the vertebral bodies adjacent the disc space to be fused;
 - inserting at least a second bone screw through the second plate segment and into the other of the vertebral bodies adjacent the disc space to be fused;
 - locking at least one of the bone screws with at least one bone screw lock adapted to lock to the plate only a single bone screw; and
 - permitting movement of the first and second plate segments attached to the adjacent vertebral bodies relative to one another.
2. (original) The method of claim 1, wherein the permitting step includes the step of permitting movement of the first and second plate segments in only a single direction toward one another.

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3. (original) The method of claim 1, wherein the permitting step includes the step of allowing but not causing the movement of the adjacent vertebral bodies by movement of the first and second plate segments of the plate.
4. (original) The method of claim 3, wherein the permitting step includes the first and second plate segments being free to move toward one another.
5. (original) The method of claim 1, wherein the permitting step includes the step of allowing movement of the first and second plate segments of the plate in response to movement of the adjacent vertebral bodies.
6. (original) The method of claim 1, wherein the permitting step includes the sub-step of limiting the movement of the first and second plate segments relative to one another to sequential increments along the longitudinal axis of the plate.
7. (original) The method of claim 1, wherein the permitting step includes the step of causing movement of the adjacent vertebral bodies by moving the first and second plate segments relative to one another.
8. (original) The method of claim 7, wherein the step of causing movement of the adjacent vertebral bodies includes the step of generating a compressive load across the disc space between the adjacent vertebral bodies.
9. (original) The method of claim 8, wherein the permitting step includes the first and second plate segments being free to move toward one another.
10. (original) The method of claim 7, wherein the step of causing movement of the adjacent vertebral bodies includes the step of storing a compressive load across the disc space between the adjacent vertebral bodies.
11. (original) The method of claim 10, wherein the permitting step includes the first and second plate segments being in fixed relationship to one another.
12. (original) The method of claim 7, further comprising the steps of providing an instrument configured to cooperatively engage the fastener and at least a portion of at least one of the first and second plate segments, and utilizing the instrument to move the fastener and the first and second plate segments relative to one another along a mid-longitudinal axis of the plate.

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13. (original) The method of claim 12, wherein the utilizing step includes the sub-step of rotating the fastener at least in part with the instrument.
14. (original) The method of claim 1, wherein the permitting step occurs prior to the locking step.
15. (original) The method of claim 1, wherein said permitting step includes the sub-step of moving the first and second plate segments relative to one another after the step of inserting the bone screws.
16. (original) The method of claim 1, wherein said permitting step includes the sub-step of moving the first and second plate segments relative to one another before the step of inserting the bone screws.
17. (original) The method of claim 1, further comprising the step of applying a compressive load to the adjacent vertebral bodies.
18. (original) The method of claim 1, wherein said permitting step includes the sub-step of applying a compressive load to the adjacent vertebral bodies.
19. (original) The method of claim 1, wherein the permitting step includes moving the first and second plate segments from a first position to a second position.
20. (original) The method of claim 1, further comprising the step of tightening the fastener from a first position to a second position to resist movement of the first and second plate segments relative to each other in at least one direction.
21. (original) The method of claim 20, wherein the tightening step includes resisting movement of the first and second plate segments relative to one another when the fastener is in the second position.
22. (original) The method of claim 20, wherein the tightening step includes permitting movement of the first and second plate segments relative to one another when the fastener is in the second position.
23. (currently amended) The method of claim 22, ~~wherein the~~ wherein the tightening step includes limiting the movement of the first and second plate segments relative to one another to one direction along the longitudinal axis of the plate.

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24. (original) The method of claim 22, wherein the tightening step includes limiting the movement of the first and second plate segments relative to one another to sequential increments along the longitudinal axis of the plate.
25. (original) The method of claim 20, wherein said tightening step includes tightening said fastener to cause the fastener to tighten to the first plate segment while permitting movement of the first and second plate segments relative to one another.
26. (original) The method of claim 1, further comprising the step of adjusting the overall length of the plate by moving the first and second plate segments relative to each other.
27. (original) The method of claim 1, wherein the providing step includes selecting at least one of the first and second plate segments from a group of plate segments of various lengths.
28. (original) The method of claim 1, wherein the providing step includes selecting at least one of the first and second plate segments from a group of plate segments of various configurations.
29. (original) The method of claim 1, wherein the providing step includes providing a plate having at least a third plate segment.
30. (original) The method of claim 29, wherein the providing step includes selecting at least one of the first, second, and third plate segments from a group of plate segments of various lengths.
31. (original) The method of claim 29, wherein the providing step includes selecting at least one of the first, second, and third plate segments from a plurality of plate segments of various configurations.
32. (original) The method of claim 1, further comprising the step of combining the plate with an interbody spinal fusion implant.
33. (original) The method of claim 32, wherein the implant comprises at least in part bone.

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- 34. (original) The method of claim 32, wherein the implant is an allograft interbody bone graft implant.
- 35. (original) The method of claim 32, wherein the implant is an artificial implant.
- 36. (original) The method of claim 1, further comprising the step of combining the plate with a fusion promoting substance.
- 37. (original) The method of claim 36, wherein the fusion promoting substance is at least in part other than bone.
- 38. (currently amended) The method of claim 36, wherein the fusion promoting substance is at least one of in part bone, hydroxyapatite, and bone morphogenetic protein.

Claims 39 and 40 (cancelled).

- 41. (original) The method of claim 36, wherein the fusion promoting substance comprises genes coding for the production of bone.
- 42. (original) The method of claim 1, wherein the providing step further comprises the step of providing bone screws for engaging the plate to the cervical spine, wherein at least a portion of one of the plate, the at least one bone screw lock, and the bone screws is a bioresorbable material.
- 43. (original) The method of claim 42, wherein the bioresorbable material is at least in part bone.
- 44. (original) The method of claim 1, further comprising the step of combining the plate with a substance for inhibiting scar formation.
- 45. (original) The method of claim 1, further comprising the step of combining the plate with an antimicrobial material.
- 46. (original) The method of claim 1, further comprising the step of treating the plate with an antimicrobial material.
- 47. (original) The method of claim 1, further comprising the step of electrifying at least one of the plate, the fastener, the bone screws, and the bone screw lock for purposes of stimulating bone growth and contributing to bone fusion.

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48. (new) The method of claim 1, wherein the step of providing includes providing each of the plate segments with a length sufficient to overlap at least a portion of the adjacent vertebral bodies.
49. (new) The method of claim 1, wherein the step of inserting at least a first bone screw includes inserting the at least a first bone screw through the plate and into the vertebral body and the step of locking includes locking the bone screw inserted through the plate and into the vertebral body.
50. (new) The method of claim 1, wherein the step of locking includes threading a portion of the at least one bone screw lock against a portion of the plate.
51. (new) The method of claim 1, wherein the at least one bone screw includes a head, the step of locking being accomplished without penetrating the head of the at least one bone screw.